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Preservation and Dissemination of the Hardcopy Documentation Portion of the NCSP Nuclear Criticality Bibliographic Database

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September 2, 2009

NCSD 2009

Richland, WA, United States

September 13, 2009 through September 17, 2009

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Preservation and Dissemination of the Hardcopy Documentation Portion of the NCSP Nuclear Criticality Bibliographic Database

September 16, 2009



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This work performed under the auspices of the U.S. Department of Energy by
Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344

UCRL-XXXX-12345

A Bibliography is Just the Starting Point

- The goal is to get an actual document
- An example involves our own recent efforts:
 - We wished to retrieve some remarks made by Dr. Robert Rothe regarding the near-catastrophic loss of the archival records at Los Alamos.
 - We used the bibliographic database, located the document, and downloaded the full-text report. This was accomplished within minutes.
 - Our work will help others to accomplish similar tasks with minimal effort.



Here's How We Quickly Obtained the Full-Text Report

We searched the NCSP bibliography for the Rothe Document

Rothe, Robert E.	A Technically Useful History of the Critical Mass Laboratory at Rocky Flats	LA-UR- 05-3247	5/1/2005	http://www.csirc.net/library/reports.shtml
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And then used the Web link to obtain the full-text report



A Hardcopy Collection is Subject to Loss & Dispersal

- A large collection of documents was obtained during the NCIS program.
- When the program ended the documents were stored at LLNL but the collection became essentially unusable.
- The documents were stored in boxes and there was no practical way to locate and retrieve a document of interest.



Examples of Potential Loss, Dispersal, & Degradation

- A fire near the archives at Los Alamos was a threat to the documents stored there.
- The document collection at Rocky Flats was dispersed when the site closed.
- When the Nuclear Criticality Safety Division at LLNL moved this summer we discovered more documents that had been misplaced.
- Many in our collection are quite old and some have become brittle and faded.



Some Documents Have Badly Faded

A collection cannot be properly maintained without continued programmatic support.



We Maintain a Collection of 1000s of Documents

- They were preserved at LLNL but until recently the collection was not stored in a properly retrievable condition.
- We used the bibliographic database to help organize the collection and filed the documents into a condition where they can easily be scanned.
- The scanned documents are being made accessible via links within the Web database.
- This virtual library will not be subject to physical dispersal or degradation.



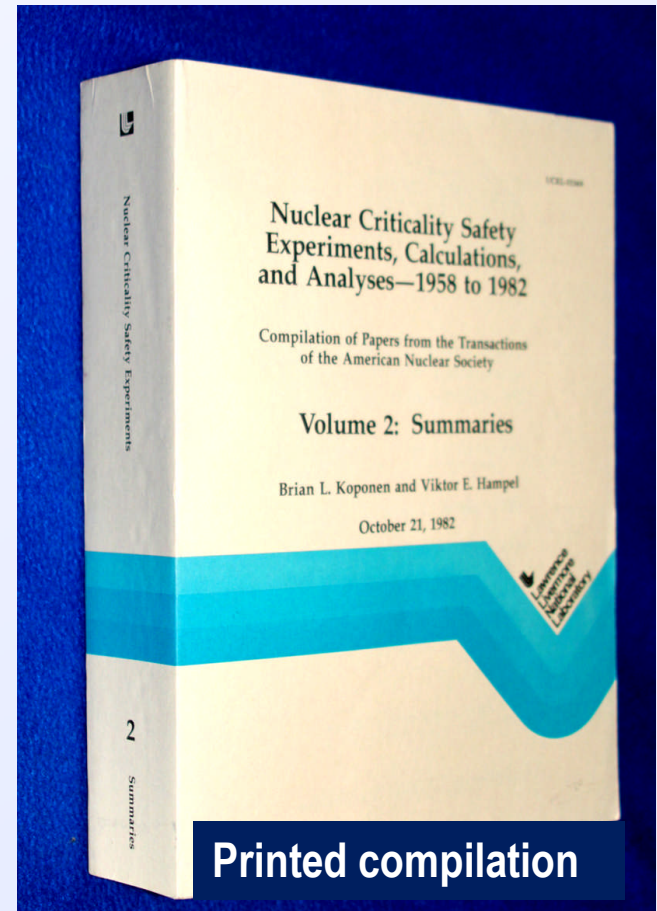
Documents Available for Possible Scanning

Document Source	Number of Documents
Hardcopies in Our File Cabinets	3,000 +
Conference Papers	1,400
ANS Transactions	2,500
Nuclear Science & Engineering	460
Nuclear Technology	280
Dyer-Thomas Documents	1,000



An ANS Transactions Compilation Would Become Available Online

- ANS approval would be necessary.
- Updating to the present time would be desired.
- The scanning could be done quickly.



Summarizing

- The NCSP web bibliography can assist in identifying a document but obtaining a copy can still be difficult and costly.
- A large number of criticality safety reports have been collected at LLNL that were used as the foundation of the NCSP bibliographic database.
- Dispersal of the document collection or even storage at a federal records center could make the scanning effort unpractical in the future.
- The best method of long-term preservation of the documents is in digital format.



Summarizing

- Critical experiments reports are needed for International Handbook of Evaluated Criticality Safety Benchmark Experiment evaluations.
- The document collection preserves a knowledge base that is becoming unavailable by direct contact with the authors through the passage of time.
- Documents are scanned for which there are no copyright issues.
- A virtual library will be available on the NCSP web site. It will ensure preservation of the collection, and will provide for cost-effective document retrieval.

